# Angle Sum and Exterior Angles

## Today's Standard

8.G.A5 - Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.

## Real-World Applications for this Standard

Architectural design using triangles; Navigation and map reading; Computer graphics and game design; Engineering structures and bridges

## Today I Learned

Today, I learned about angles in triangles and lines. We found out that the inside angles of a triangle always add up to 180 degrees. We also learned how to find angles when lines cross each other.

## Common Stumbling Blocks

Sometimes, kids think that the outside angle of a triangle is the same as the two inside angles next to it. But it's really the sum of the two far-away inside angles. Also, kids might think that angles made when lines cross are random, but they actually have special relationships.

## Quiz Me

- What is the sum of the inside angles of a triangle?

- What is the outside angle of a triangle equal to?

- What happens when parallel lines are cut by another line?

- What do you call angles that are in the same spot on different lines?

- How can you use these angle rules in real life?

## Help Me

Angles in triangles and lines are important in real life. For example, architects use these rules to design buildings. Pilots use them to navigate planes. Knowing these rules helps us understand and solve problems in the world around us.